## Abstract

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A nitride based 3-5 group compound semiconductor light emitting device comprising: a substrate; a buffer formed above the substrate; a first In-doped GaN layer formed above the buffer layer; an In<sub>x</sub>Ga<sub>1-x</sub>N/In<sub>y</sub>Ga<sub>1-y</sub>N super lattice structure layer formed above the first In-doped GaN layer; a electrode contact layer formed above the xN/InvGa1-vN super lattice structure layer; an active layer first electrode contact layer above the functioning to emit light; a second In-doped GaN layer; a GaN layer formed above the second In-doped GaN layer; and a second electrode contact layer formed above the GaN layer. The present invention can reduce crystal defects of the nitride based 3-5 group compound semiconductor light emitting device and improve the crystallinity of a GaN GaN based single crystal layer in order to improve the performance of the light emitting device and ensure the reliability thereof.